

WMP-IFT-879 - Application No. 10/882,793
Response to Office action 2/5/2007 12:00:00 AM
Response submitted April 10, 2007

REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 15-28 remain in the application. None of the claims have been amended.

The only issue in this application is the rejection of the claims as being anticipated by Bryson (US 5,905,370) under 35 U.S.C. § 102. We respectfully traverse.

The Examiner states, with regard to claim 15, that Bryson discloses: "said drive circuit comparing . . . the control signal with a reference signal . . . and, in dependence on the comparison, providing a drive pulse . . . of a given duration or no drive pulse." Office action, page 3. Respectfully, this is patently wrong.

Bryson does not disclose a switching converter in which a drive pulse of a given duration or no drive pulse is generated in dependence on a comparison between a control signal and a reference signal.

Instead, Bryson describes a switching converter which is either driven in PWM (pulse width modulation) mode or in PFM (pulse frequency modulation, pulse skipping mode) depending on the load requirement. Firstly, the patent does not detail the functionality of the converter in its PWM mode operation. It is well known to those of skill in the art that a switching converter with fixed clock generates drive pulses in periodic time periods. The time duration of the drive pulses (i.e., the duty cycle)

WMP-IFT-679 - Application No. 10/662,793
Response to Office action 2/5/2007 12:00:00 AM
Response submitted April 10, 2007

depends on the load that is connected to the converter. In the PFM mode operation, on the other hand, the frequency varies with which the drive pulses are generated.

Generating pulses, however, wherein a control signal is periodically compared with a reference signal and a drive signal of a given time duration is provided in response to the comparison does not fall either under the rubric of PWM nor under the rubric of PFM. The reference to Bryson, therefore, does not disclose the claimed invention, either explicitly or implicitly.

With regard to the Examiner's detailed reference to the various components in the schematic of Bryson's Fig. 1, it should be noted that the op-amps 16 and 20 are but "signal conditioning amplifiers" in the voltage control signal path and the op-amp 18 is a signal conditioning amplifier in the current controlling signal path. The effectively functional comparator is only the amplifier 22 which provides for the PWM control signal into the digital controls 24. Bryson explains the operation very clearly:

During heavy loading conditions, the controller functions as a current-mode PWM (pulse width modulation) step down regulator. Under light loads, the regulator functions in the PFM (pulse frequency modulation) or pulse skipping mode. The controller senses the load level and switches between the two operating modes automatically, thus optimizing its efficiency under all loading conditions.

Bryson, col. 3, lines 17-24.

As further explained by Bryson, the comparator 22 provides the main PWM control signal for input into the controller 24. The switch to the frequency modulation ("pulse skipping mode") is effected by "[a]dditional comparators (not shown) in the analog control circuit." Col. 3, lines 57-59.

WMP-IFT-679 - Application No. 10/662,793
Response to Office action 2/5/2007 12:00:00 AM
Response submitted April 10, 2007

It is respectfully submitted that Bryson does not disclose (i.e., "clearly anticipate") the claimed invention. Bryson does not provide for the claimed periodic comparison, the result of which causes the driver to either issue a drive signal of a given duration or not to issue a drive signal.

In summary, none of the references, whether taken alone or in any combination, either show or suggest the features of claim 15. Claim 15 is, therefore, patentable over the art and since all of the dependent claims are ultimately dependent on claim 15, they are patentable as well.

In view of the foregoing, reconsideration and allowance of claims 15-28 are solicited.

Respectfully submitted,



For Applicant(s)

WERNER H. STERMER
REG. NO. 34,956

WHS:bh

April 10, 2007

Lerner Greenberg Stermer LLP
P.O. Box 2480
Hollywood, Florida 33022-2480
Tel.: 954-925-1100
Fax: 954-925-1101